



GUIDE



# ATM Total Cost of Ownership Guide

Global insights and best practices for ATM ownership and management

By Robin Arnfield | Contributing writer, ATM Marketplace

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# EXECUTIVE SUMMARY

By Robin Arnfield | Contributing writer, ATM Marketplace

During 2016, ATM Marketplace conducted a survey, sponsored by Fiserv, on the total cost of ATM ownership and key ATM management and operational challenges.

As the ATM and self-service channel becomes more complex and integrated, many financial institutions (FIs) are finding it increasingly difficult to keep up with the pace of change in technology, regulations and consumer expectations.

FIs are finding that they need to transform their branches and integrate all their digital and physical channels to meet the growing pressure to lower operational costs, improve ATM availability and become more agile in delivering services customers expect.

The survey sought to explore respondents' cost pressures, key operational challenges in terms of vendor, device and cash management, and the metrics and key performance indicators (KPIs) they use to assess the performance of their ATM fleets.

With over 325 respondents globally, the majority consisted of financial institutions with 31.7 percent owning and managing over 2,000 ATMs, 9.3 percent 1,000-2,000 ATMs and 23 percent 100-1,000 ATMs, while 21 percent have under 100.

The survey found that reducing the cost of hardware, maintenance, cash-handling, and improving monitoring and security practices are top of mind for respondents.



**Robin Arnfield,**  
*contributing writer*

Robin Arnfield has been a technology journalist since 1983. His work has been published in ATM Marketplace, Mobile Payments Today, Kiosk Marketplace, Retail Customer Experience, Virtual Currency Today, ATM & Debit News, ISO & Agent, CardLine, Bank Technology News, the Financial Times, Cards International, Retail Banker International, Private Banker International and Electronic Payments International. He has covered the United Kingdom, European, North American and Latin American payments markets.

Because of customers' growing usage of ATMs, ATM deployers need to ensure best practices in their ATM management, monitoring and maintenance operations to effectively deliver services customers expect.

Simply monitoring if an ATM is up or down is not sufficient. It doesn't matter to a customer if ATM deployers say that their networks have 98-99 percent availability. If their ATMs fail during peak usage periods then it's failed them when customers need it the most — for example, during lunch break.

With the rise in ATM transactions and the growing complexity of ATM and other self-service devices, ATM deployers need to ask themselves: "How well do I know my ATM network, and how quickly can I resolve ATM issues for my customers?"

## About the sponsor:

Fiserv® is driving innovation in Payments, Processing Services, Risk & Compliance, Customer & Channel Management and Insights & Optimization. A global leader in financial services technology, Fiserv is a FORTUNE 500 company and one of FORTUNE magazine's World's Most Admired Companies. Our solutions help more than 13,000 banks, credit unions and thrifts, billers, mortgage lenders and leasing companies, brokerage and investment firms, and other business clients deliver financial services at the speed of life. Fiserv solutions enable our clients to create financial experiences that enhance the way people live and work today. Visit [fiserv.com](http://fiserv.com) to learn more.

Device Manager™ from Fiserv is an event-driven incident management system which automatically detects, analyzes and manages critical ATM and self-service device information from any vendor. The solution helps Financial Institutions and other device owners ensure their critical network is constantly up and running to deliver financial services to customers. With its unique workflow rules, advanced interface and business intelligence reporting capabilities, ATM operators gain real-time visibility into their networks and insights to maximize profitability and vendor performance.

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Fiserv offers comprehensive management and operations support for ATM networks, ensuring that machines are up and running when customers need them the most.

For more information, see [www.fiserv.com](http://www.fiserv.com).

# Bank self-service

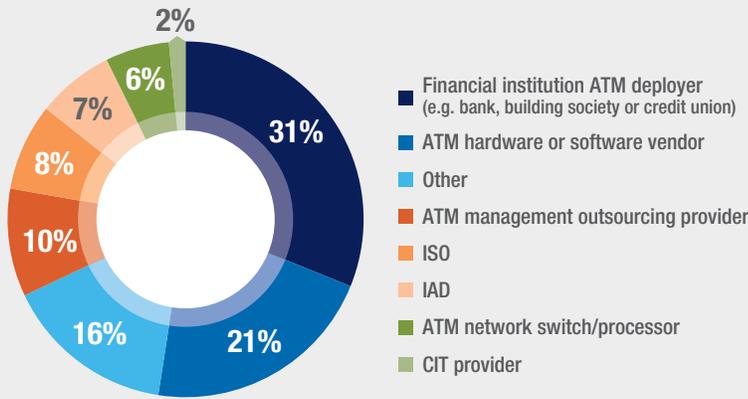
## SURVEY RESULTS

### Summary of Key Findings

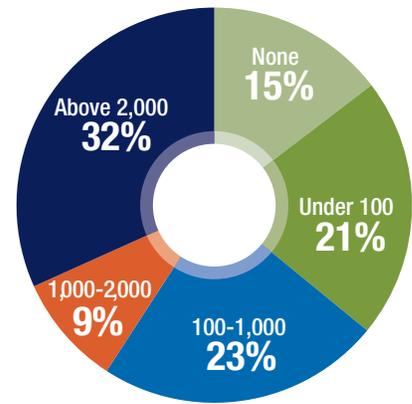
With over 325 financial institutions, IADs and other ATM providers from across the US, Europe, Latin America, Africa, and Asia Pacific, the survey provides insights to key cost drivers, areas for improvement, key performance indicators (KPI) metrics and top trends impacting future ATM management strategies. Key insights include:

- Compliance and regulations still plague the industry as the most urgent operational issue to solve followed by real-time transaction monitoring, cash management and service vendor management.
- Custom reporting and real-time analytics are among the top sought after capabilities in an ATM monitoring solution so solution offerings need to be superior in these aspects.
- A third (35 percent) of the respondents expressed the need to improve their monitoring and security practices as a top priority.
- CIT, cash management and hardware were indicated as the most common ATM network cost components for ATM deployers, accounting for over 20 percent of their total costs.
- Just under half of ATM managers have independent reporting solutions from their vendors, while around a third rely on contracted vendors to provide reporting on the performance of their ATM network and a further 20 percent don't use reporting solutions.
- A large majority either manually manage incidents at least half of the time or they do not know about them when they initially occur. This indicates a deficiency in real time diagnostics as well as capabilities to remotely (automatically) resolve incidents.
- Three quarters (74 percent) of respondents identified "transportation and cash-handling costs" as the biggest challenge, followed by 63 percent identifying "ATM out of cash." ATM managers need solutions that allow for greater efficiency in transportation and cash-handling logistics to lower associated costs.

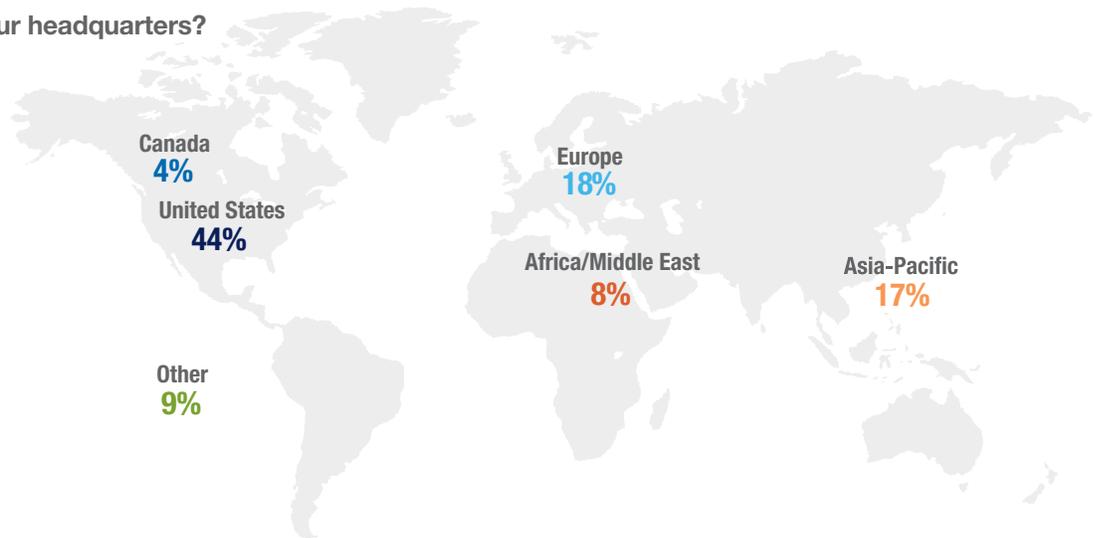
### 1. What type of company do you work for?



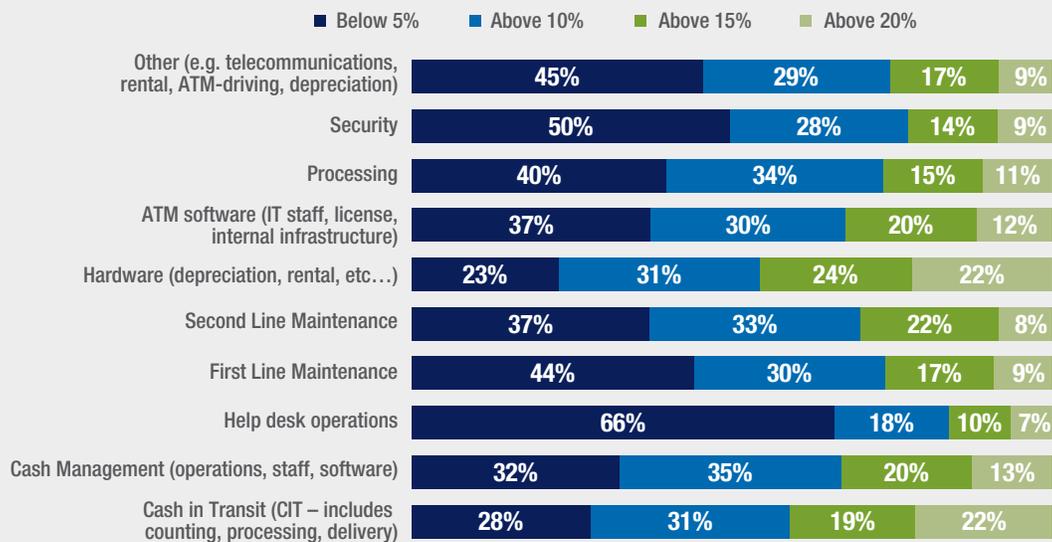
### 2. How many ATMs are in your fleet?



### 3. In what region is your headquarters?



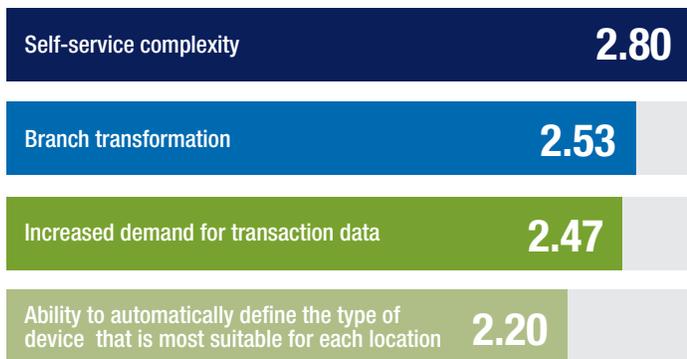
### 4. What percentage of the total cost of your ATM network comes from:



CIT, cash management and hardware were identified as the most common ATM network cost components for respondents identifying components accounting for over 20 percent of total costs, and represent areas to focus on to improve efficiency and operating costs.

### 5. Which of these areas are complicating your ATM strategy?

Respondents ranked answer choices from 1-4, with 4 being most important

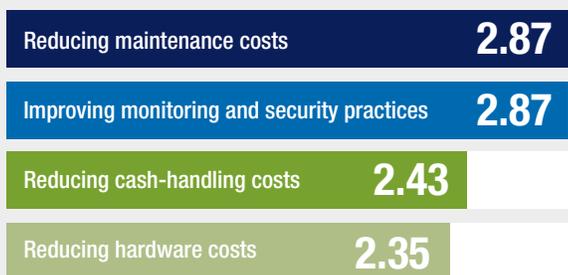


“Self-service complexity” was identified as the top area complicating their organizations’ ATM strategy by 38 percent of respondents, suggesting that ATM deployers are seeking solutions to make self-service simpler. This is due to the fact that multiple types of devices with different functions are being connected to self-service networks.

Also, ATMs are offering more sophisticated transactions such as intelligent deposit as well as transactions that use cloud-based applications.

### 6. In which area do you feel you have the most room for improvement?

Respondents ranked answer choices from 1-4, with 4 being most important

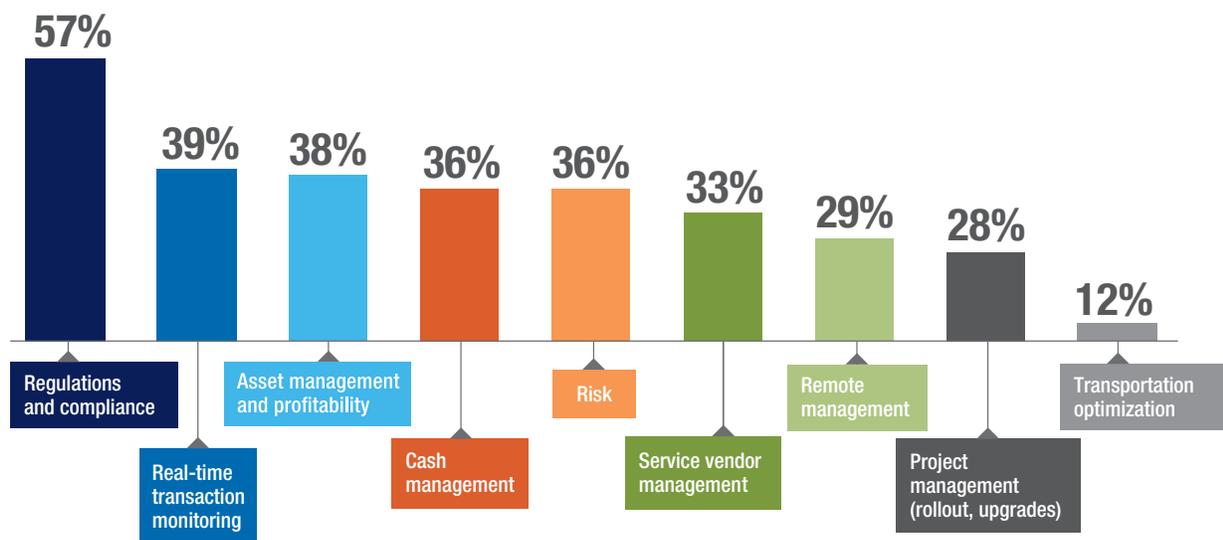


The figures in this chart refer to the rating average for each cost area.

Reducing maintenance costs and improving monitoring and security practices are shown to have the most room for improvement, followed by reducing cash handling costs.

### 7. Which of the following operational challenges are the most urgent to solve?

Respondents chose their top three answers

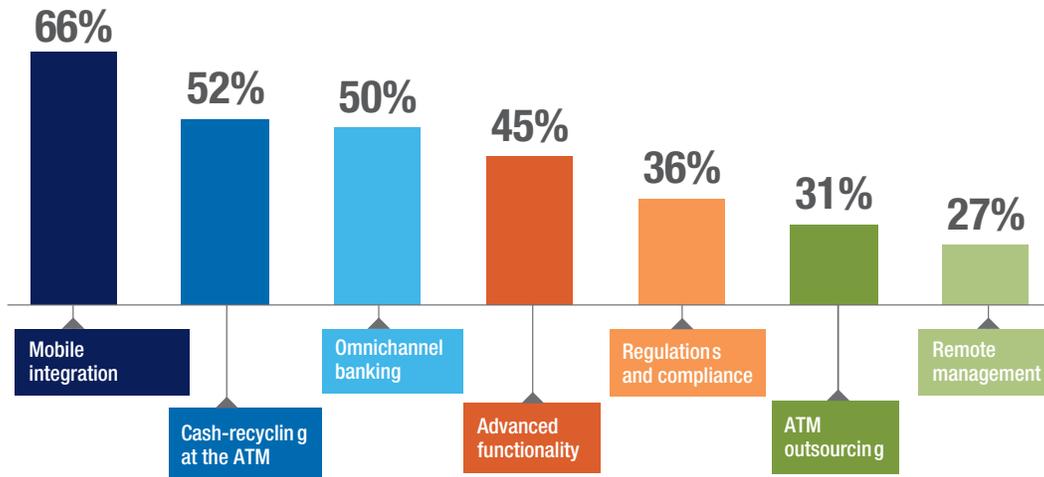


When asked which operational challenges are the most urgent to solve, 57 percent of respondents identified regulations and compliance as the most urgent operational challenge needing to be solved. Concern for compliance means that solutions must make fulfillment of pre-determined guidelines a priority, primarily to avoid potentially costly penalties.

Given the increasing volume and complexity of regulations which financial institutions need to comply with, it’s perhaps not surprising that, in second place, 39 percent of respondents identified real-time transaction monitoring. In third place, 38 percent identified asset management and profitability, with 36 percent identifying cash management and 36 percent risk.

## 8. What are the top trends that will influence ATM channel management strategy in the next 5 years?

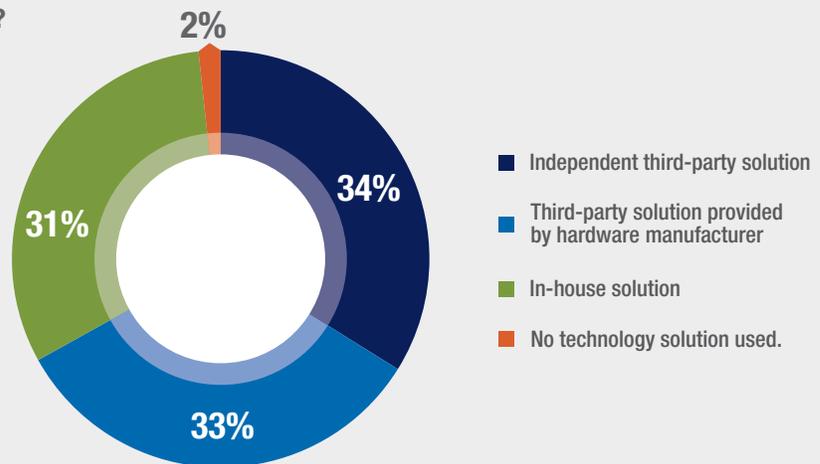
Respondents chose their top three answers



When asked to identify the top trends influencing ATM channel management strategy in the next five years, 66 percent of respondents identified mobile integration as a top trend. ATM deployers see mobile integration as an increasingly important avenue for consumer interaction, so they are looking for solutions that accommodate and encourage that channel.

## 9. How do you monitor your ATM network?

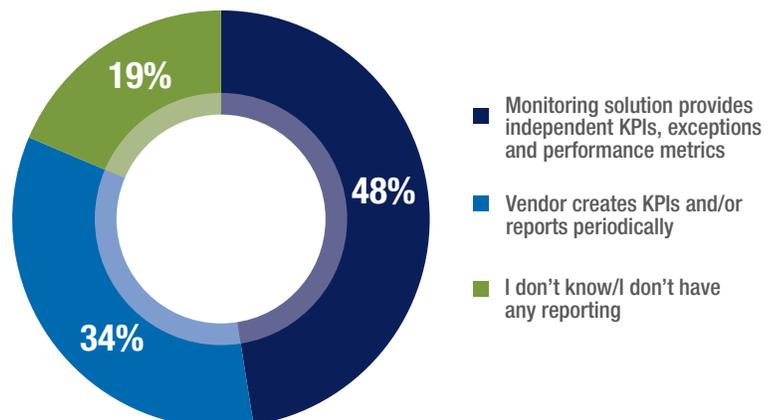
The survey found that approximately two-thirds of ATM owners lack the capacity or desire to monitor their own network. This implies that third-party providers are very accountable for ATM network monitoring/management.



## 10. How do you monitor performance of service vendors and ensure that SLAs are met?

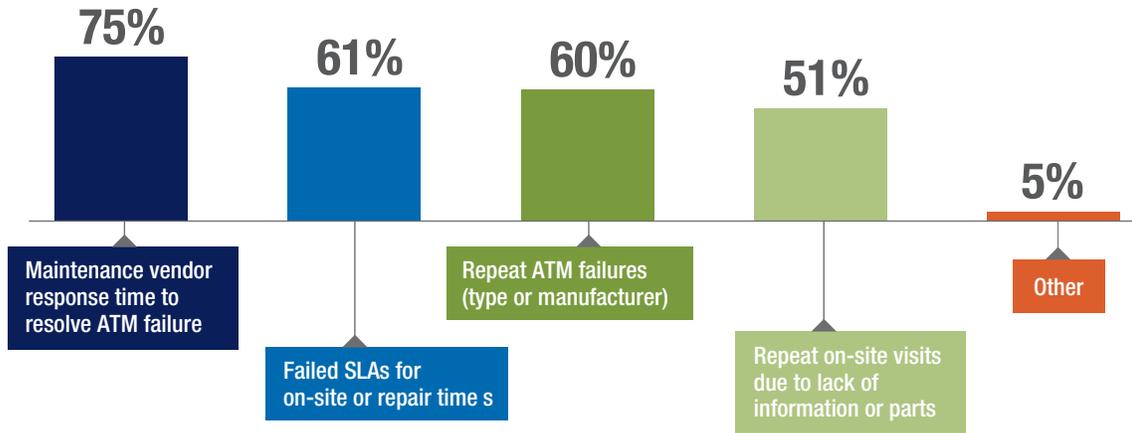
Around a third of ATM deployers don't create internal KPIs, as they rely on the ones set by vendors' monitoring solutions and are dependent on vendors to accurately report their own performance against contracted service levels. Surprisingly, close to 20 percent of ATM owners either don't know, or don't utilize any reporting.

Just under half of respondents have monitoring solutions offering independent KPIs and reporting.



### 11. Which other KPIs do you use to measure vendor performance?

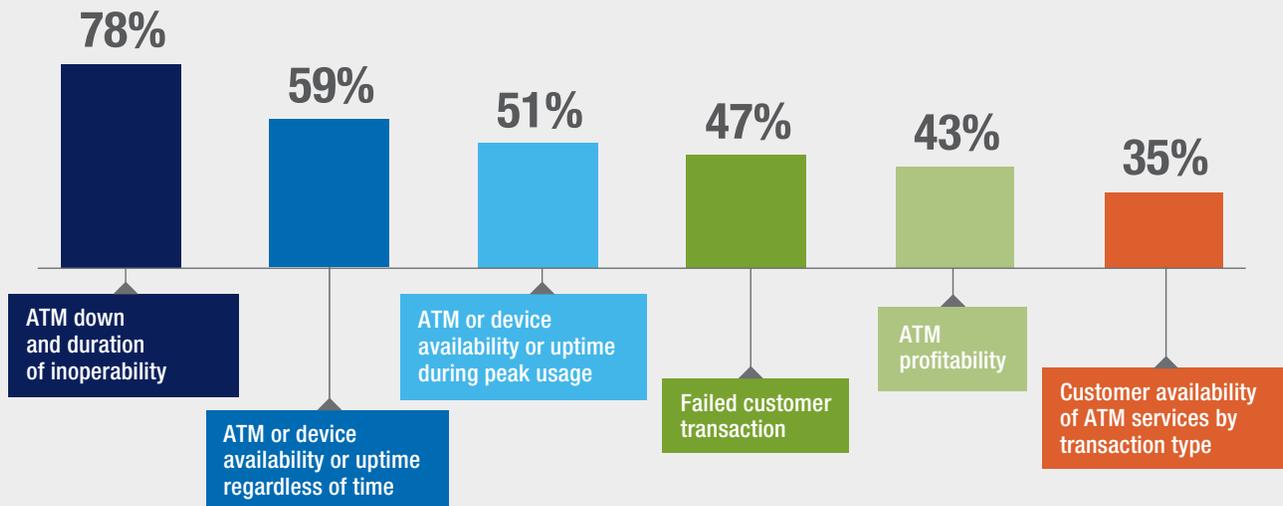
Respondents selected all that applied



The majority of ATM deployers place value on knowing how fast their failures are identified and how fast their contracted maintenance team resolves the issues. Understanding this allows bottlenecks to be addressed. Repeat failures and on-site visits provide warning signs on potential chronic issues that need to be addressed to avoid redundant service calls.

### 12. Which KPIs are most critical to measure network performance?

Respondents chose their top three answers



### 13. What percentage of incidents are fully automated from start to resolution and are not routed to your help-desk for manual handling?

When evaluating help desk efficiency, one of the areas to look at is “how automated is my help desk? Are they working on the right incidents with the highest priority? How are they spending their time?”

This question revealed a low level of automation for incident resolution. A key take-away is that nearly two-thirds of respondents either manually handle incidents at least half of the time or don’t know. Only 23 percent of the respondents said that 80 percent and above of incidents are fully automated and not referred to their help desk for manual handling.

#### 14. What percentage of incidents are resolved remotely?

Only about a quarter (24%) of respondents to this question are able to resolve 50% or more of their incidents remotely. This indicates that most do not have this capability or are unable to measure this metric.

Specific comments included: “don’t know, as it isn’t reported by the vendor”; “unable to measure this KPI”; and “5 percent, and we cannot monitor this. This is done by the vendor.”

#### 15. What is the biggest challenge you face in ATM monitoring, maintenance or vendor management?

The top 5 most common challenges included:

- Managing service quality and vendor SLA
- Poor monitoring or remote management capabilities
- Lack of reporting or accurate data to fix incidents
- Turnaround time / Repeat failures
- Controlling costs

Additional challenges:

- Unnecessary first-line maintenance visits
- Lack of skilled workforce or resources
- ATM fraud/security
- Keeping up with upgrades and growing network
- Expensive or unavailable parts for old ATMs
- Real-time input from fleet

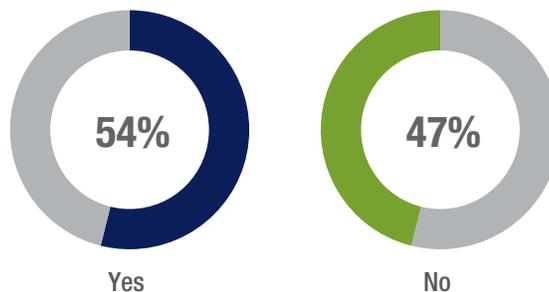
#### 16. What additional functionality would you like to see from your ATM monitoring solution?

*Respondents selected all that applied*



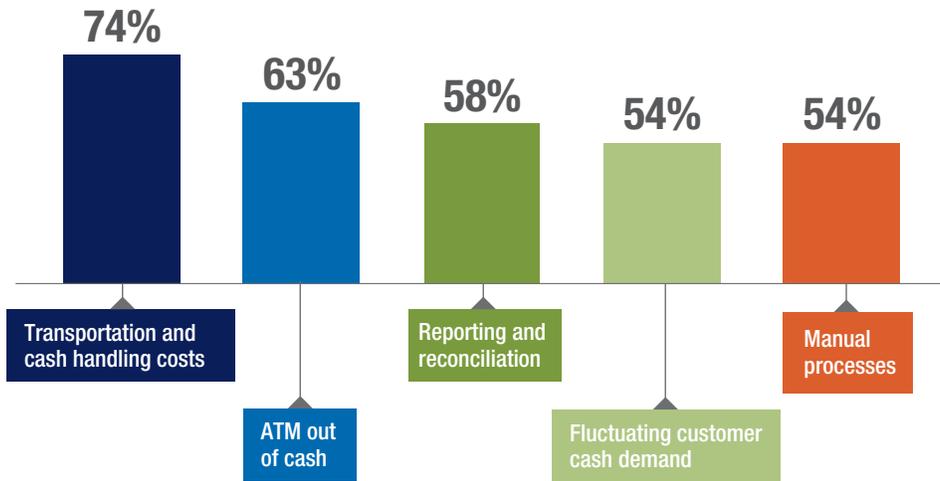
Custom reporting and real-time analytics clearly stands out as a desirable capability for an ATM monitoring solution. ATM managers value real-time data collection and having the flexibility to access and choose what information is presented and shared with stakeholders for quicker, more accurate decision-making.

#### 17. Are you measuring availability for peak versus non-peak hours?



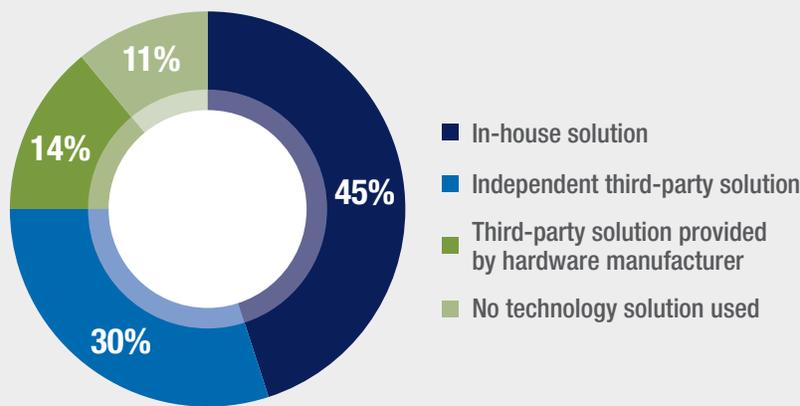
**18. Which of these areas create the biggest challenge in managing cash for your network?**

*Respondents chose their top three answers*



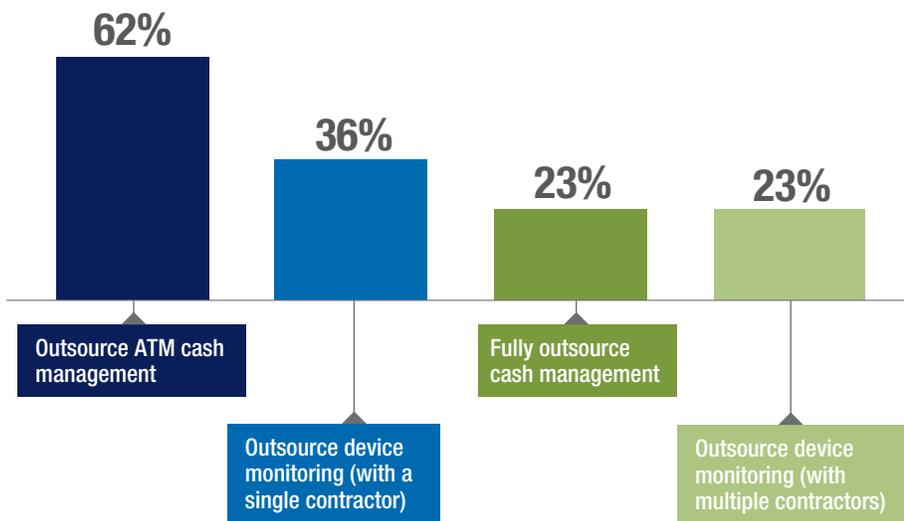
Three quarters (74 percent) of respondents identified “transportation and cash-handling costs” as the biggest challenge, followed by 63 percent identifying “ATM out of cash.” Just over half identified manual processes or fluctuating customer cash demand as the biggest challenges. ATM managers need solutions that allow for greater efficiency in transportation and cash-handling logistics to lower associated costs.

**19. How do you manage your ATM network’s cash demands?**



**20. What outsourcing options have you chosen?**

*Respondents selected all that applied*



When asked what outsourcing options they have chosen, the top response was “outsourcing ATM cash management,” selected by 62 percent of respondents. It is very common for ATM deployers to outsource ATM cash management including forecasting, ordering, etc. for management by a third-party to focus on core competencies and revenue generating strategies.

## 21. What is the biggest challenge you face in cash management?

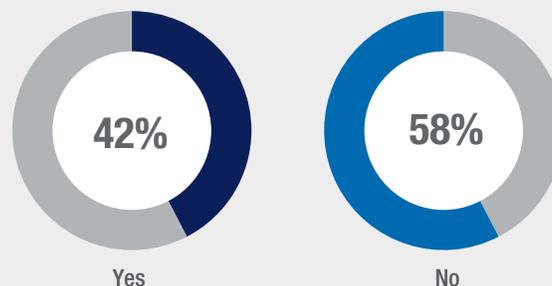
The top categories when asked to identify the biggest challenge they face in cash management were ranked in order of priority

- Operating costs
- Lack of data/forecasting capability
- Transportation risk and costs
- Cash level monitoring and visibility
- Vendor SLAs

Other answers included:

- Holding costs in high interest-rate climate
- Enterprise-wide cash optimization
- Reduce risks and quantities of supply
- Reporting
- When there are no fit banknotes for ATMs
- Outage resolution
- Specific bills run out
- Cash-recycling
- Balancing branch cash requirements and ATM cash allocation

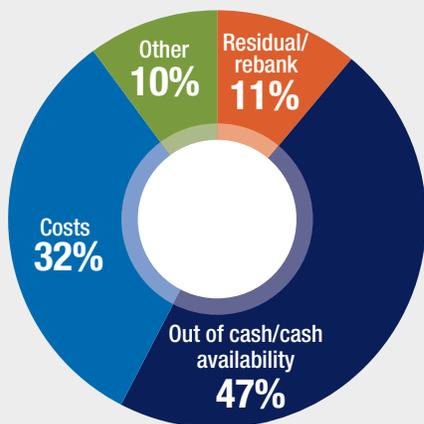
## 22. Do you use cash-recycling technology?



Almost 60 percent of cash managers don't utilize cash-recycling technology, which means their need for daily monitoring and replenishment is higher. It also means they have opportunities for better customer experiences and a reduction in cash costs.

## 23. What cash management KPIs do you use?

*Respondents selected all that applied*



Asked what cash management KPIs they use, 47 percent of respondents use "out of cash/cash availability." For almost half of ATM deployers, monitoring their cash levels is a key performance indicator, which suggests that optimal solutions should monitor this function and relay relevant information back to the deployer for cash decisions to be made.

## 24. If you have outsourced your cash management, what KPIs do you use to manage vendor performance?

Fourteen percent of the respondents to this question don't use KPIs to manage cash management vendor performance.

The most common KPIs indicated were:

- Transactions reports/ratios/
- SLAs
- Costs
- Cash availability/out of cash percentage
- Cash efficiency ratios
- Error rates/out of-service reports
- Transaction ratios
- Response times
- ATM availability
- Time and costs

## 25. What additional card or PIN-based transactions are needed at ATMs?

Respondents were asked to state what additional card/PIN-based transactions are needed at ATMs — for example, mobile ATM access, purchasing prepaid debit cards from ATMs, applying for new banking products at ATMs and person-to-person (P2P) transfers/remittances.

The two top services listed by the respondents to this question were mobile ATM access, mentioned by 38 respondents, followed by P2P transfers, mentioned by 15. Seven respondents mentioned bill payments. ATM fleet managers are anticipating mobile and P2P transfers becoming a dominant way of acquiring funds with consumers' increasing dependency on technology.

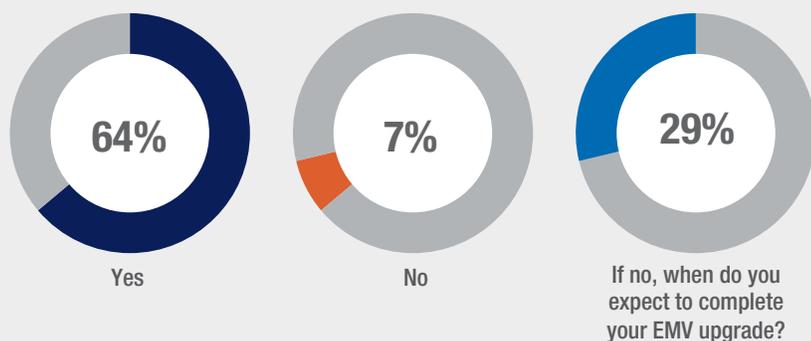
The most common transactions identified in order:

1. Mobile ATM access (by a large margin)
2. P2P transfers
3. Applying for new banking products
4. Load/bill payments
5. Purchasing pre-paid cards

Specific answers included:

- Fiserv's PopMoney and HalCash's Pin4 P2P services
- Applying for bank products, P2P transfers, remittances, bill payments
- Loan payments, check cashing
- Mobile ATM access, purchasing prepaid debit cards from ATMs, applying for new banking products at ATMs, P2P transfers/remittances
- Buying insurance
- Ticketing and cross-channel transactions
- Mobile wallet recharge, P2P transfers and remittances
- Prepaid debit cards
- Utility bill payment, insurance purchase, e-commerce

## 26. Have you upgraded your ATM fleet for EMV?



Almost all ATM fleet deployers have prepared for, or are preparing for, the surge in consumers with EMV-enabled cards. EMV is a global card payments standard designed to ensure more secure transactions at the point of sale and at ATMs.

Responses to the question "if no, when do you expect to complete your EMV upgrade?" included:

"EMV-capable but not activated yet";

"Planning is now on going. Hopefully within the next two years";

"We have started the process, we expect to continue throughout 2017."

## 27. How have increasing compliance pressures impacted your organization?

Asked how increasing compliance pressures have impacted their organizations, respondents' specific answers included:

- Adds to cost, new software costs, lower profitability
- Hasn't impacted our organization
- Requires additional capital to invest and comply with regulators
- More reporting required
- Increasing compliance and risk have driven workflow and not allowed for/or detracted from focus on new technologies and R&D
- High degree of pressure to adopt new technology for customer service
- Ongoing due diligence has increased with additional requirements and an increase in the number of audits



# Key ATM Market Trends

## ATM Cash Withdrawals

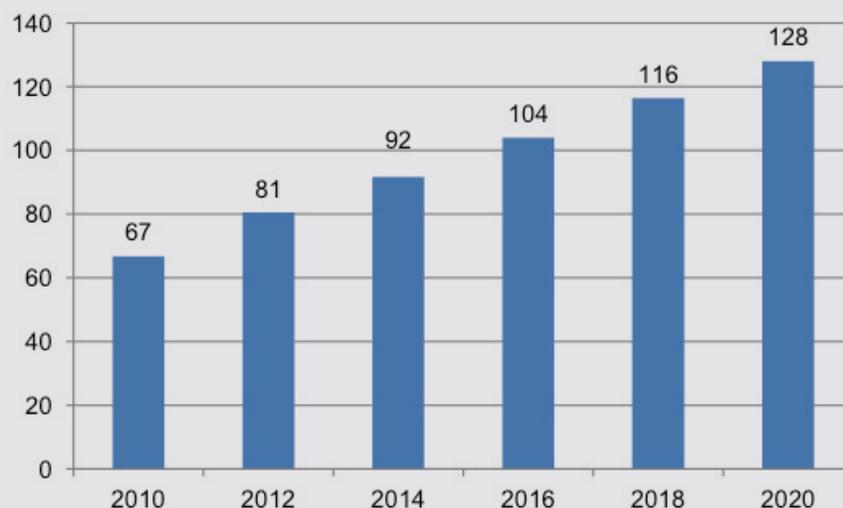
According to London, U.K.-based RBR's "[Global ATM Market and Forecasts to 2020](#)" report, 92 billion cash withdrawals were made at ATMs globally in 2014, representing a 7 percent increase from 2013. In 2014, the global ATM installed base passed the 3 million mark, the RBR study says.

The RBR report says 31 percent of ATMs worldwide included [automated deposit functionality](#) in 2014, a year-over-year increase of 3 percent, with 20 percent of North American ATMs offering automated deposits.

The increase in ATM use will outpace growth in the installed ATM base between 2015 and 2020, reaching 128 billion withdrawals annually, according to RBR.



**Global cash withdrawal volume (billions), 2010-2020**



source: RBR Global ATM Market and Forecasts to 2020

“Cash is not dead,” David Johnson, **director product management, self-service solutions at Fiserv**, said in a Fiserv/INETCO Systems/ATMIA [webinar](#). “Cash is growing in absolute terms around the world.”

## **Growing Complexity of Self-Service**

“What ATM deployers are finding is that self-service technology is becoming more complex all the time,” Johnson told a joint ATMIA/Fiserv/INETCO webinar. “This is due to the fact that multiple types of devices with different functions are being connected to self-service networks. Also, ATMs are offering more sophisticated transactions such as intelligent deposit as well as transactions that use cloud-based applications.”

“A lot more is expected of the self-service channel than a few years ago due to the new types of self-service devices,” Marc Borbas, VP of product marketing at INETCO, told the webinar. “The ability to stage withdrawals from smartphones and the other new products and services being provided at the ATM will make the customer journey a lot more complicated and add a lot of complexity at the back end.”

Branch transformation is an example of how ATM networks are becoming more complex. “As ATMs move from traditional ATM switching infrastructure into the branch infrastructure and the core banking infrastructure, the way that deployers manage ATMs and the way they serve transactions to consumers is changing,” Johnson said. “The ATM management tools you used in the past will no longer support you going forward.”

**“A metric telling you how many customers you’ve let down because an ATM has failed is very useful. But what’s really vital is the ability to follow through and resolve the issue as quickly as possible, particularly during peak times to minimize customer impact.”**

— David Johnson, director product management, self-service solutions, Fiserv

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# Interview with ATM Industry Specialist

ATM Marketplace interviewed Sergio Galve, Global Head of ATMs at Madrid, Spain-based cash management services company Prosegur, about the key issues his organization faces in ATM management.

**Q.** What are the key operational challenges and cost pressures that you face in ATM monitoring/maintenance/vendor management?

**A.** Our main operational challenges are focused on the FLM teams. We believe that the better the FLM is, the higher availability rates you get. It's all about a quick FLM response/fix and accurate diagnosis.

Regarding cost pressures, we try to keep the personnel costs under control, by automating processes (as we do with Fiserv Device Manager) and by keeping an eye on the productivity side and technicians' idle time.

**Q.** Would you please give your view of best practice in ATM monitoring/maintenance/ATM vendor management?

**A.** We believe that having a quick response time - including remote reset, a first-time fix (when this is possible), good diagnosis of problems and a resolution plan as well as agile logistics for ATM parts will lead to success!

**Q.** What are the key operational challenges and cost pressures that you face in cash management?

**A.** Regarding cash forecasting and cash management, we're seeing a challenging scenario for some key factors, at least in Spain. The number of branches has decreased dramatically both through mergers and acquisitions and through network optimization. This has forced CIT providers to move from JIT (just-in-time) to fixed schedules due to the fact that it's no longer profitable to have enough resources devoted to getting to virtually any point in the country in less than 12 hours' notice. The cost of cash is close to 0 percent, so the fewer replenishments, the better.

**Q.** Would you please give your view of best practice in cash management?

**A.** Having a cash management system with the flexibility to support both fixed and dynamic JIT schedules with the ability to switch between these models based on changes to the environment helps us quickly respond to and meet customer needs.



# Best Practices

## Cash Management Solutions

Micki Nguyen, product marketing director, Fiserv, wrote in RBR's Banking Automation Bulletin: "FIs need to clearly define their cash management goals, considering internal operational implications and external factors driving customer demand and cash-handling costs."

According to Nguyen, software solutions can automate the cash forecasting, optimization and management process to minimize cost and increase efficiency. "But software alone can't solve all the problems," she wrote in RBR's Banking Automation Bulletin. "Implementing a successful cash management strategy requires direction from executive management, retail buy-in and cooperation from internal and external stakeholders."

Nguyen wrote in Banking Automation Bulletin that successful management of cash and currency requires:

- **People and processes:** This involves organizations working to break down internal barriers and define roles and processes to centrally manage cash for greater control and visibility across the enterprise.
- **Performance metrics and reporting:** Measurements help organizations assess cash management progress against their plan. Tools such as business analytics empower an organization to quickly identify and turn around problem areas.
- **Technology, integration and scalability.** Technology solutions need to be flexible to integrate into internal and external systems and robust to support future growth. Software-as-a-service offers unique opportunities for FIs to quickly implement powerful cash management solutions without shelling out capital investments, and for saving on internal IT costs.

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**"Banks without a cash management strategy will be left holding the bill, and probably a heft one."**

Source: "Managing Currency in an Uncertain Economy," RBR's Banking Automation Bulletin

## ATM Management Metrics and Real-Time Analytics

According to the ATM Marketplace/Fiserv white paper “It’s Not Just About ATM Availability. It’s About the Customer,” ATM deployers must take the following steps to ensure maximum availability:

- Identify ATMs that, because of their high-usage volumes, should be targeted for specific action to minimize failed interactions, and ensure their ATM management systems can prioritize those ATMs for attention.
- Carry out scheduled maintenance activities such as software updates when customers are unlikely to be using their ATMs, such as in the middle of the night.
- Use a real-time ATM monitoring and management system that offers true multivendor management processes and automated routing to internal and/or external problem owners, as well as providing management reporting on vendor performance, customer usage and internal help desk operations.
- Be able to monitor services in real time against set SLA timers and proactively escalate until the ATM is up and running, and be able to independently report on and hold service vendors accountable to ensure high levels of performance and availability.
- Ensure their ATM monitoring and management systems offer them the ability to create ad hoc queries as well as the flexibility to create their own unbiased KPIs rather than simply using the vendor’s recommended KPIs.

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**“Your ATM management system needs to offer you the flexibility to create your own unbiased KPIs rather than just use your vendor’s recommended KPIs.”**

— David Johnson, director product management, self-service solutions, Fiserv



### Suggested customer-focused KPIs:

- Impact of lost opportunities: This evaluates ATM availability in terms of parameters including location, time of day or peak transaction periods.
- Transaction completion rates/failed customer interactions: This is a better way to evaluate how ATM network performance correlates to customer experience.
- Transaction slowdowns: This represents the number of transactions that failed to complete as expected by the customer, and as specified or agreed to by a service provider.
- Cash usage rates: This enables the ATM deployer to forecast cash-in/cash-out requirements.
- Average wait times at an ATM: This shows peak demand periods and how long customers are waiting to be serviced to take necessary actions.

*Source: ATM Marketplace/Fiserv white paper “It’s Not Just About ATM Availability. It’s About the Customer”*

## Leveraging Data and Remote Management to Boost Network Performance

ATM deployers need to experience a high degree of visibility within their ATM networks by using device management and analytics software to collect data such as ATM failure, usage, predictive behavior and reliability metrics. This data will enable deployers to understand how well they are delivering products and services to their customers.

Benefits of Using Reporting and Analytics:

- Understand customer behavior and transactions during peak and non-peak periods
- Direct resources and business rules to improve ATM uptime during peak periods
- Breakdown costs of each ATM
- Identify recurring and chronic failures by manufacturer
- Manage and hold vendors accountable to contracted service levels

David Johnson of Fiserv wrote in an article in RBR's Banking Automation Bulletin: "Traditional ATM management solutions have relied on information coming from the ATM switch, but now it's necessary to monitor hardware and software components that may not be connected to a conventional ATM switching environment. Leading FIs, ATM deployers and retailers are leveraging transaction data streamed off the wire, as well as a new generation of solutions that run on the device itself.

"Being able to remotely monitor activity and gather information, including detailed status reports on the many hardware, platform and software components that make up self-service delivery channels, is just the beginning. A high-performing ATM management system should also enable FIs to resolve issues anywhere on the ATM channel network, update marketing content and provide debugging capabilities — all from a remote location. When staff members are able to quickly and easily reset a machine or retrieve a log file without sending someone to an ATM, everyone wins."



## Redefining Availability and Ensuring Uptime in the Customer's Eyes

High ATM availability doesn't give the entire picture and doesn't automatically lead to satisfied customers enjoying positive customer experiences.

Traditionally, ATM availability has been calculated in terms of the amount of time an ATM is out of service.

However, this calculation fails to take into consideration the value of specific high-usage time periods compared to low-usage time periods, according to the ATM Marketplace/Fiserv white paper "It's Not Just About ATM Availability. It's About the Customer."

Stats beyond availability:

- Number of failed customer interactions
- What type of transactions or services failed
- Where issue occurred (i.e. device, dynamic applications, networks or connections)
- Details of frequency and cause of customer service complaints
- Loss of revenue from failed transactions

Customers are increasingly using multifunction ATMs for self-service transactions previously handled by tellers, such as high-value cash withdrawals, fund transfers, bill payments and cash or check deposits. So FIs must ensure their ATM channels are available 24/7 to deliver such services.

This means ATM deployers must be able to quickly resolve issues at their ATMs, analyze service usage by each of their customer segments and manage the performance of cross-channel customer transactions, regardless of where they begin and end.

Bob Meara, a senior analyst with U.S. consultancy Celent's banking practice, told an ATM Marketplace/INETCO webinar that ATM transactions are on the rise for most FIs and compose a growing share of customer transactions. "In that environment, particularly as they enter the branch lobby, maximizing ATM uptime will become even more important," he said.

Customers now expect to be able to receive instant help if they experience problems at ATMs. "For most of its life, the ATM has been isolated from the rest of the bank," Meara said. "If an ATM malfunctioned, consumers didn't have the expectation that they could receive help."

David Johnson of Fiserv says ATM deployers need to take action to resolve ATM problems in real time. "This involves issue detection, identifying a resolution plan, communicating with all relevant staff using any means of communications they prefer, and proactively monitoring the progress of the fix and helping the deployer to understand whether the resolution occurred according to plan or was delayed," he says.

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**In today's environment, consumers are conditioned to have access to near-instant help — anytime, anywhere. When problems occur at ATMs, staff will need to be in a position to help. Monitoring solutions will have multiple users in the bank going forward — help desks, remote tellers, branch staff."**

— Bob Meara, senior analyst, U.S. consultancy Celent's banking practice

# GLOSSARY

**Acquirer:** FI or its agent that acquires data relating to a payment transaction and forwards the data into the interchange system. In the ATM context, this is typically the ATM owner.

**Acquirer host:** The computer used to process the acquirer transactions and data. Also known as host processor.

**Acquirer processor:** An FI that acquires transactions from ATMs and POS terminals, sends them via a switch to the issuer processor for authorization and then settles authorized transactions.

**ATMIA:** ATM Industry Association ([www.atmia.com](http://www.atmia.com)).

**Cash management:** The process of managing the cash circulating among ATMs, branches, vaults and CIT (cash-in-transit) premises in a cost-efficient way given specific business requirements.

**CIT:** Cash in transit, the physical transfer of banknotes from one location to another.

**Electronic funds transfer network:** An EFT network is an ATM or POS processor. The EFT network handles ATM and/or POS transactions and allows bank customers to use their ATM cards at its ATMs and/or at a merchant's POS terminals.

**EMV cards:** Chip-based payment cards developed by the EMVCo consortium, whose original members were Europay, MasterCard and Visa. EMVCo's six member organizations are American Express, Discover, JCB, MasterCard, UnionPay and Visa.

**FI:** Financial institution such as a bank, building society or credit union.

**First-line maintenance (FLM):** Initial support level responsible for resolving basic customer technology issues, ATM jams and dwindling inventories (such as paper, ink and other supplies). This may involve remote support.

**Independent ATM deployer:** IADs deploy mostly convenience or stand-alone ATMs.

**Independent sales organization:** ISOs are organizations that deploy ATMs and POS terminals at venues such as merchants, gas stations and hotel lobbies. ISOs must be sponsored by an FI.

**Intelligent deposit:** An ATM function, which permits checks, remittance forms and cash to be deposited and processed using a single, common terminal without using envelopes.

**Issuer processor:** An FI that issues an ATM card to a bank customer. The FI is responsible for verifying its customer's PIN whether the customer is using one of the bank's own ATMs or another bank's ATMs. If the customer uses another bank's ATM, the issuer processor receives the ATM transaction from the acquirer processor via a switch.

**Off-premise machines:** Terminals such as ATMs, which are installed outside bank branches.

**Outsourcing:** Refers to delegating operational functions and duties to outside suppliers.

**Remote monitoring:** This involves monitoring of customer's terminals from a remote location.

**Second-line maintenance (SLM):** Level of support that resolves issues that cannot be fixed through first-line maintenance. This includes routine preventive machine checkups, in which worn parts are replaced before they stop working.

**Third-line maintenance (TLM):** Level of support that resolves issues that cannot be fixed through second-line maintenance — for example, a design error or the unavailability of spare parts that have become obsolete.

**Total cost of ownership (TCO):** The total costs of a product or service, including all direct and indirect costs.

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